

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A pattern recognizing device for classifying a feature distribution of input data into any of a stated number of models, comprising:

activation means for indicating a beginning of speech;

extracting means for extracting a pattern of said input data as the feature distribution;

storing means for storing said stated number of models;

classifying means for classifying the feature distribution that has been extracted by said extracting means into any of said stated number of models; and

generating means for generating said model that corresponds to such a state that said data do not exist, on the basis of the noise that has been input at the time just preceding the inputting of said data, and for updating that which is corresponding to it and is stored in said storing means

wherein the generating means measures a variation of correct speech recognition rate during a time period between activation of the activation means and the beginning of speech.

2. (Original) The pattern recognizing device of claim 1, wherein in the case where the feature distribution of such a state that said data do not exist, and the probability distribution of said model that corresponds to such a state that said data do not exist are normal distribution, said generating means generate the expected value of said model that corresponds to such a state that said data do not exist, as the mean of the expected values that correspond to the respective

components of the feature distribution of such a state that said data do not exist, and generate the variance of said model that corresponds to such a state that said data do not exist, as the mean of the variances that correspond to the respective components of the feature distribution of such a state that said data do not exist.

3. (Original) The pattern recognizing device of claim 1, wherein in the case where the feature distribution of such a state that said data do not exist, and the probability distribution of said model that corresponds to such a state that said data do not exist are normal distribution, said generating means generate the expected value and the variance of said model that corresponds to such a state that said data do not exist, by the use of the mean of the expected values that correspond to the respective components of the feature distribution of such a state that said data do not exist.

4. (Original) The pattern recognizing device of claim 1, wherein in the case where the feature distribution of such a state that said data do not exist, and the probability distribution of said model that corresponds to such a state that said data do not exist are normal distribution, said generating means generate the probability distribution of said model that corresponds to such a state that said data do not exist, on the basis of the linear combination of the statistics that correspond to the respective components of the feature distribution of such a state that said data do not exist.

5. (Original) The pattern recognizing device of claim 1, wherein in the case where the feature distribution of such a state that said data do not exist, and the probability distribution of

said model that corresponds to such a state that said data do not exist are normal distribution, said generating means generate the probability distribution of said model that corresponds to such a state that said data do not exist, on the basis of the sum of the statistical populations that correspond to the respective components of the feature distribution of such a state that said data do not exist.

6. (Currently Amended) A pattern recognizing method of a pattern recognizing device for classifying a feature distribution of input data into any of a stated number of models, said method comprises:

an activation step for indicating a beginning of speech;

an extracting step of extracting the pattern of said input data as the feature distribution;

a storing step of storing said stated number of models;

a classifying step of classifying the feature distribution that has been extracted on said extracted step into any of said storing number of models; ~~and~~

a generating step of generating said model that corresponds to such a state that said data do not exist, on the basis of the noise that has been input at the time just preceding the inputting of said data, and then updating the corresponding one that has been stored on said storing step; and

measuring a variation of correct speech recognition rate during a time period between activation of a switch and the beginning of speech.

7. (Currently Amended) A providing medium for providing a program to a pattern recognizing device for classifying a feature distribution of input data into any of a stated number

of models, said program can be read by a computer which causes the pattern recognizing device to execute the processing that comprises:

- an activation step for indicating a beginning of speech;
- an extracting step of extracting the pattern of said input data as the feature distribution;
- a storing step of storing said stated number of models;
- a classifying step of classifying the feature distribution that has been extracted on said extracting step into any of said stated number of models; ~~and~~
- a generating step of generating said model that corresponds to such a state that said data do not exist, on the basis of the noise that has been input at the time just preceding the inputting of said data, and then updating the corresponding one that has been stored on said storing step;
- and
- measuring a variation of correct speech recognition rate during a time period between activation of a switch and the beginning of speech.

8. (Currently Amended) A pattern recognition device comprising:

- a transmission means;
- an activation means for indicating a beginning of speech;
- an extraction means for extracting one or more data patterns from a first transmission signal including at least one data pattern of noise and one data pattern of speech;
- a storage means for storing a number of data pattern models including at least one of noise and one of speech;
- a classifying means for classifying the extracted data pattern as one of the stored data models,

an updating means for updating the stored data pattern models, with extracted data patterns; and

a generating means for generating a second transmission signal having the noise removed,

wherein, said extraction means extracts a noise data pattern in a transmission immediately following switching on the transmission means, but prior to the occurrence of a speech data pattern portion of the transmission, and

wherein said extracted noise data pattern and said speech data pattern are utilized to distinguish portions of said first transmission signal and cancel the noise in said first transmission signal to produce said second transmission signal, and

wherein the generating means measures a variation of correct speech recognition rate during a time period between activation of the activation means and the beginning of speech.